

Docket Number: 081468-0275503  
Client Reference: P-0166.010-US



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED  
FEB 12 2004  
TECHNOLOGY CENTER 28000

In Re the Application of

CASTENMILLER, et al.

Group Art Unit: 2882

Application No.: 09/739,622

Examiner: Ho, Allen

Filed: December 20, 2000

Confirmation No.: 4742

For: POSITION DETECTION SYSTEM FOR USE IN LITHOGRAPHIC APPARATUS

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Please charge Deposit Account 033975 in the amount of \$180.00 in payment of the fee under 37 CFR 1.17(i)(p). Please credit or debit Deposit Account 033975 as needed to ensure consideration of the disclosed information. Two duplicated copies of this paper are attached.


I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 CFR 1.97(e)(1).

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JL RUS1806

CASTENMILLER, et al. - - 09/739,622  
Client/Matter: 081468-0275503

The references were cited in a counterpart foreign application. An English language version of the foreign search report is attached for the Examiner's information.

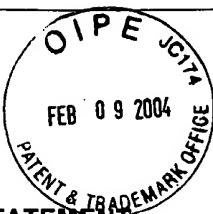
Respectfully Submitted,

  
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FORM PTO-1449 (modified)  
To: U.S. Department of Commerce  
(PW FORM PAT-1449)  
Patent and Trademark Office



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Client Ref.

0275503

P0166.010-US

**INFORMATION DISCLOSURE STATEMENT  
BY APPLICANT**

Applicant: CASTENMILLER et al.

Appln. No.: 09/739,622

Filing Date: December 20, 2000

Date: February 9, 2004

Page 1 of 1

Examiner: Ho, Alle

Group Art Unit: 2882

**U.S. PATENT DOCUMENTS**

Examiner's Initials*	Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	AR	4,676,649	06/1987	Phillips	356	401
	BR					
	CR					
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	MR					
	NR					

**FOREIGN PATENT DOCUMENTS**

	Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract		Translation Readily Available	
					Enclosed	No	Enclose	No
	OR	2 297 875 A	08/1996	UK	Kim	X		
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	RR							
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	TR							
	UR							
	VR							
	WR							
	XR							

**OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)**

	YR				
	ZR				
	AAR				
	BBR				
	CCR				
	DDR				

Examiner

Date Considered:

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



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Europäisches  
Patentamt

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des brevets

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Rec'd. 22 DEC 2003

Action by.....

Datum/Date

22.12.03

Zeichen/Ref./Réf.

N.78608A JGL

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°.

00311469.1-1242-

Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire  
ASML Netherlands B.V.

## COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☒ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

☐ abstract

☐ title

☒ The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract:

2

## REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 00 31 1469

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 676 649 A (PHILLIPS EDWARD H) 30 June 1987 (1987-06-30) * column 9, line 20 - column 10, line 2 * * column 14, line 33 - line 52 * * figures 6,17 *	1-4,12, 14,15	G03F9/00 G03F7/20
X	GB 2 297 875 A (SAM SUNG AEROSPACE IND) 14 August 1996 (1996-08-14) * page 5, line 10 - page 9, line 17 * * figures 1,4 *	1-3,6,7, 12,14,15	
X	GB 2 162 942 A (PUTRA SIREGAR NURHAYATI INDRA) 12 February 1986 (1986-02-12) * page 1, line 46 - page 6, line 18 * * figures *	15	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			G03F G01B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 3 December 2003	Examiner Aguilar, M.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 31 1469

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

03-12-2003

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4676649	A	30-06-1987	EP 0230540 A2	05-08-1987
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GB 2162942	A	12-02-1986	NONE	



## ABSTRACT / ZUSAMMENFASSUNG / ABREGE

00311469.1

A position detection apparatus (10A,10B,10C) comprises a radiation source (11) mounted on an isolated reference frame (MF) and a two-dimensional detector (15) mounted adjacent said radiation source. The object (WT) whose position is to be detected has a retro-reflector (13) mounted on it so as to reflect light emitted from the radiation source along a return path (14) that is parallel to but displaced from the incident light path (12). The amount of displacement is dependent on the position of the object and is measured by the two-dimensional detector. Three such apparatus can be combined in a system to measure the position of the object in all six degrees of freedom.